Ludovic Duponchel

List of Publications by Year
in descending order

84	2,317	218381	243296
papers	citations	26 h-index	44 g-index

86	86	86	2739
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Data fusion of LIBS and PIL hyperspectral imaging: Understanding the luminescence phenomenon of a complex mineral sample. Analytica Chimica Acta, 2022, 1192, 339368.	2.6	15
2	Archaeological Mortar Characterization Using Laser-Induced Breakdown Spectroscopy (LIBS) Imaging Microscopy. Applied Spectroscopy, 2022, , 000370282110711.	1.2	8
3	Fusing spectral and spatial information with 2-D stationary wavelet transform (SWT 2-D) for a deeper exploration of spectroscopic images. Talanta, 2021, 224, 121835.	2.9	11
4	Towards a new pseudo-quantitative approach to evaluate the ionization response of nitrogen compounds in complex matrices. Scientific Reports, 2021, 11, 6417.	1.6	9
5	Robust variable selection in the framework of classification with label noise and outliers: Applications to spectroscopic data in agri-food. Analytica Chimica Acta, 2021, 1153, 338245.	2.6	6
6	Saturated signals in spectroscopic imaging: why and how should we deal with this regularly observed phenomenon?. Analytica Chimica Acta, 2021, 1157, 338389.	2.6	4
7	Novel four-dimensional approach for the structural characterization of neutral nitrogen compounds in vacuum gas oils using UHPLC-IM-QqToF analysis. Analytica Chimica Acta, 2021, 1169, 338611.	2.6	3
8	Comparability of Raman Spectroscopic Configurations: A Large Scale Cross-Laboratory Study. Analytical Chemistry, 2020, 92, 15745-15756.	3.2	46
9	Sulfur compounds characterization using FT-ICR MS: Towards a better comprehension of vacuum gas oils hydrodesulfurization process. Fuel Processing Technology, 2020, 210, 106529.	3.7	8
10	UDP-GLYCOSYLTRANSFERASE 72E3 Plays a Role in Lignification of Secondary Cell Walls in Arabidopsis. International Journal of Molecular Sciences, 2020, 21, 6094.	1.8	16
11	Exploration of the Reactivity of Heteroatomic Compounds Contained in Vacuum Gas Oils during Hydrotreatment Using Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. Energy & Fuels, 2020, 34, 10752-10761.	2.5	5
12	Classification of challenging Laser-Induced Breakdown Spectroscopy soil sample data - EMSLIBS contest. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2020, 169, 105872.	1.5	47
13	Evaluating the Benefits of Data Fusion and PARAFAC for the Chemometric Analysis of FT-ICR MS Data Sets from Gas Oil Samples. Energy & Fuels, 2020, 34, 8195-8205.	2.5	2
14	Should we prefer inverse models in quantitative LIBS analysis?. Journal of Analytical Atomic Spectrometry, 2020, 35, 794-803.	1.6	13
15	Low-Level Fusion of Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Data Sets for the Characterization of Nitrogen and Sulfur Compounds in Vacuum Gas Oils. Analytical Chemistry, 2020, 92, 2815-2823.	3.2	9
16	Second-order universal calibration. Talanta, 2020, 212, 120787.	2.9	3
17	Randomised SIMPLISMA: Using a dictionary of initial estimates for spectral unmixing in the framework of chemical imaging. Talanta, 2020, 217, 121024.	2.9	7
18	Detection of minor compounds in complex mineral samples from millions of spectra: A new data analysis strategy in LIBS imaging. Analytica Chimica Acta, 2020, 1114, 66-73.	2.6	32

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19	Determination of the Reactivity Degree of Various Alkaline Solutions: A Chemometric Investigation. Applied Spectroscopy, 2019, 73, 1361-1369.	1.2	6
20	Chemometric Exploration of APPI(+)-FT-ICR MS Data Sets for a Comprehensive Study of Aromatic Sulfur Compounds in Gas Oils. Analytical Chemistry, 2019, 91, 11785-11793.	3.2	12
21	Insights from Nitrogen Compounds in Gas Oils Highlighted by High-Resolution Fourier Transform Mass Spectrometry. Analytical Chemistry, 2019, 91, 12644-12652.	3.2	16
22	Image Fusion. Data Handling in Science and Technology, 2019, , 311-344.	3.1	8
23	Multi-excitation hyperspectral autofluorescence imaging for the exploration of biological samples. Analytica Chimica Acta, 2019, 1062, 47-59.	2.6	15
24	A detailed analysis of the influence of Î²-cyclodextrin derivates on the thermal denaturation of lysozyme. International Journal of Pharmaceutics, 2019, 554, 1-13.	2.6	6
25	Angle Distribution of Loading Subspace (ADLS) for estimating chemical rank in multivariate analysis: Applications in spectroscopy and chromatography. Talanta, 2019, 194, 90-97.	2.9	8
26	Effect of image processing constraints on the extent of rotational ambiguity in MCR-ALS of hyperspectral images. Analytica Chimica Acta, 2019, 1052, 27-36.	2.6	12
27	Tracking hidden organic carbon in rocks using chemometrics and hyperspectral imaging. Scientific Reports, 2018, 8, 2396.	1.6	12
28	Exploration of megapixel hyperspectral LIBS images using principal component analysis. Journal of Analytical Atomic Spectrometry, 2018, 33, 210-220.	1.6	67
29	Exploring hyperspectral imaging data sets with topological data analysis. Analytica Chimica Acta, 2018, 1000, 123-131.	2.6	20
30	Fast epi-detected broadband multiplex CARS and SHG imaging of mouse skull cells. Biomedical Optics Express, 2018, 9, 245.	1.5	16
31	Topological data analysis (TDA) applied to reveal pedogenetic principles of European topsoil system. Science of the Total Environment, 2017, 586, 1091-1100.	3.9	8
32	Studying radiolytic ageing of nuclear power plant electric cables with FTIR spectroscopy. Talanta, 2017, 172, 139-146.	2.9	10
33	Neighbouring pixel data augmentation: a simple way to fuse spectral and spatial information for hyperspectral imaging data analysis. Journal of Chemometrics, 2017, 31, e2882.	0.7	9
34	Multivariate statistical process control (MSPC) using Raman spectroscopy for in-line culture cell monitoring considering time-varying batches synchronized with correlation optimized warping (COW). Analytica Chimica Acta, 2017, 952, 9-17.	2.6	42
35	Mammalian cell culture monitoring using in situ spectroscopy: Is your method really optimised?. Biotechnology Progress, 2017, 33, 308-316.	1.3	15
36	Detection of formaldehyde oxidation catalysis by MCR-ALS analysis of multiset ToF-SIMS data in positive and negative modes. Chemometrics and Intelligent Laboratory Systems, 2017, 171, 80-85.	1.8	8

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37	A Cell Wall Proteome and Targeted Cell Wall Analyses Provide Novel Information on Hemicellulose Metabolism in Flax. Molecular and Cellular Proteomics, 2017, 16, 1634-1651.	2.5	23
38	Developing global regression models for metabolite concentration prediction regardless of cell line. Biotechnology and Bioengineering, 2017, 114, 2550-2559.	1.7	23
39	Super-Resolution in Vibrational Spectroscopy. Data Handling in Science and Technology, 2016, 30, 477-517.	3.1	1
40	Coherent anti-Stokes Raman scattering under electric field stimulation. Physical Review B, 2016, 94, .	1.1	9
41	Water quality assessment of a small peri-urban river using low and high frequency monitoring. Environmental Sciences: Processes and Impacts, 2016, 18, 624-637.	1.7	19
42	New strategy to identify radicals in a time evolving EPR data set by multivariate curve resolution-alternating least squares. Analytica Chimica Acta, 2016, 947, 9-15.	2.6	3
43	Topological data analysis: A promising big data exploration tool in biology, analytical chemistry and physical chemistry. Analytica Chimica Acta, 2016, 910, 1-11.	2.6	59
44	Has your ancient stamp been regummed with synthetic glue? A FT-NIR and FT-Raman study. Talanta, 2016, 149, 250-256.	2.9	6
45	Complete determination of plant tissues based only on autoâ€fluorescence and the advanced image analysis â€“ study of needles and stamens. Journal of Chemometrics, 2015, 29, 521-527.	0.7	0
46	Extraction of Pure Spectral Signatures and Corresponding Chemical Maps from EPR Imaging Data Sets: Identifying Defects on a CaF₂ Surface Due to a Laser Beam Exposure. Analytical Chemistry, 2015, 87, 3929-3935.	3.2	8
47	Pushing back the limits of Raman imaging by coupling super-resolution and chemometrics for aerosols characterization. Scientific Reports, 2015, 5, 12303.	1.6	35
48	Metal-induced malformations in early Palaeozoic plankton are harbingers of mass extinction. Nature Communications, 2015, 6, 7966.	5.8	66
49	In-line and real-time prediction of recombinant antibody titer by inÂsitu Raman spectroscopy. Analytica Chimica Acta, 2015, 892, 148-152.	2.6	58
50	Simultaneous data pre-processing and SVM classification model selection based on a parallel genetic algorithm applied to spectroscopic data of olive oils. Food Chemistry, 2014, 148, 124-130.	4.2	104
51	New chemometric approach MCR-ALS to unmix EPR spectroscopic data from complex mixtures. Journal of Magnetic Resonance, 2014, 248, 27-35.	1.2	11
52	Monitoring polymorphic transformations by using in situ Raman hyperspectral imaging and image multiset analysis. Analytica Chimica Acta, 2014, 819, 15-25.	2.6	63
53	Combining near and mid infrared spectroscopy for heavy oil characterisation. Fuel, 2014, 133, 310-316.	3.4	10
54	Chemometric Strategies To Unmix Information and Increase the Spatial Description of Hyperspectral Images: A Single-Cell Case Study. Analytical Chemistry, 2013, 85, 6303-6311.	3.2	43

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55	Increasing the spatial resolution of near infrared chemical images (NIR-CI): The super-resolution paradigm applied to pharmaceutical products. Chemometrics and Intelligent Laboratory Systems, 2012, 117, 183-188.	1.8	12
56	Highly sensitive terahertz spectroscopy in microsystem. RSC Advances, 2012, 2, 10064.	1.7	18
57	Trappist beer identification by vibrational spectroscopy: A chemometric challenge posed at the â€˜ChimiomÃ©trie 2010â€™ congress. Chemometrics and Intelligent Laboratory Systems, 2012, 113, 2-9.	1.8	22
58	Resolution and segmentation of hyperspectral biomedical images by Multivariate Curve Resolution-Alternating Least Squares. Analytica Chimica Acta, 2011, 705, 182-192.	2.6	100
59	Characterisation of heavy oils using near-infrared spectroscopy: Optimisation of pre-processing methods and variable selection. Analytica Chimica Acta, 2011, 705, 227-234.	2.6	54
60	Combination of mid-infrared spectroscopy and curve resolution method to follow the antioxidant action of alkylated diphenylamines. Chemometrics and Intelligent Laboratory Systems, 2011, 106, 210-215.	1.8	10
61	Parallel genetic algorithm co-optimization of spectral pre-processing and wavelength selection for PLS regression. Chemometrics and Intelligent Laboratory Systems, 2011, 107, 50-58.	1.8	47
62	Gaussian mixture models for the classification of highâ€dimensional vibrational spectroscopy data. Journal of Chemometrics, 2010, 24, 719-727.	0.7	21
63	Infrared chemical imaging: Spatial resolution evaluation and super-resolution concept. Analytica Chimica Acta, 2010, 674, 220-226.	2.6	19
64	Combination of mid-infrared spectroscopy and chemometric factorization tools to study the oxidation of lubricating base oils. Catalysis Today, 2010, 155, 255-260.	2.2	30
65	The Organization Pattern of Root Border-Like Cells of Arabidopsis Is Dependent on Cell Wall Homogalacturonan Â Â Â. Plant Physiology, 2009, 150, 1411-1421.	2.3	94
66	Support vector machines (SVM) in near infrared (NIR) spectroscopy: Focus on parameters optimization and model interpretation. Chemometrics and Intelligent Laboratory Systems, 2009, 96, 27-33.	1.8	211
67	Super-resolution and Raman chemical imaging: From multiple low resolution images to a high resolution image. Analytica Chimica Acta, 2008, 607, 168-175.	2.6	30
68	Chemometric strategies for the study of the complexation of Al(III) ions with model molecule of humic substances from UVâ€“vis data sets. Analytica Chimica Acta, 2005, 544, 337-344.	2.6	22
69	Quality Evaluation of Sugar Beet(Beta vulgaris)by Near-Infrared Spectroscopy. Journal of Agricultural and Food Chemistry, 2004, 52, 1055-1061.	2.4	56
70	Multivariate curve resolution of step-scan FTIR spectral data. Vibrational Spectroscopy, 2004, 35, 21-26.	1.2	16
71	Matrix merging arrangements for the study protein dynamics by time-resolved step-scan Fourier transform infrared spectroscopy and multivariate curve resolution. Analytica Chimica Acta, 2004, 515, 183-190.	2.6	11
72	Comparison of supervised pattern recognition methods with McNemarâ€™s statistical test. Analytica Chimica Acta, 2003, 477, 187-200.	2.6	83

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73	Statistical tests for comparison of quantitative and qualitative models developed with near infrared spectral data. Journal of Molecular Structure, 2003, 654, 253-262.	1.8	36
74	Time-Resolved Step-Scan FT-IR Spectroscopy:â€‰ Focus on Multivariate Curve Resolution. Journal of Chemical Information and Computer Sciences, 2003, 43, 1966-1973.	2.8	27
75	Multivariate Curve Resolution Methods in Imaging Spectroscopy:â€‰ Influence of Extraction Methods and Instrumental Perturbations. Journal of Chemical Information and Computer Sciences, 2003, 43, 2057-2067.	2.8	63
76	Interpretation and improvement of an artificial neural network MIR calibration. Chemometrics and Intelligent Laboratory Systems, 2002, 62, 189-198.	1.8	10
77	Degree of hydrolysis from mid-infrared spectra. Analytica Chimica Acta, 2001, 446, 255-266.	2.6	5
78	Neural network modelling for very small spectral data sets: reduction of the spectra and hierarchical approach. Chemometrics and Intelligent Laboratory Systems, 2000, 54, 93-106.	1.8	18
79	Hydrolysis of hemoglobin surveyed by infrared spectroscopy. Analytica Chimica Acta, 1999, 396, 241-251.	2.6	13
80	Classification of edible fats and oils by principal component analysis of Fourier transform infrared spectra. Food Chemistry, 1996, 57, 245-251.	4.2	86
81	Quantitative determination of polymer and mineral content in paper coatings by infrared spectroscopy. Improvements by non-linear treatments. Analytica Chimica Acta, 1996, 335, 79-85.	2.6	13
82	Classification of Green Coffees by FT-IR Analysis of Dry Extract. Applied Spectroscopy, 1995, 49, 580-585.	1.2	29
83	Quantitative analysis of latex in paper coatings by ATR-FTIR spectroscopy. Journal of Chemometrics, 1994, 8, 333-347.	0.7	26
84	When remote sensing meets topological data analysis. Journal of Spectral Imaging, 0, , .	0.0	7